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VOL. IX NO. 5. CLEVELAND, O., FEBRUARY 3, 1887. $2.00 PER ANNUM SINGLE COPIES 5 CENTS

AROUND THE LAKES.

CLEVELAND.

M. M. Drake, shipbuilder, Buffalo, was in the city Tuesday.

Captain P. H. Cheney, of Ashtabula, was in the city Tuesday.

Robert Neil, last fall chief engineer of the Oscar Townsend, goes as chief of the Colonial.

John Tomlinson, last season chief engineer on the Egyptian, goes as chief on the St. Paul.

It is said that Captain Baxter will start a branch of Captain Bradford's marine school in this city.

Captain L. H. Weeks, last season master of the steamer H. B. Tuttle, will sail the steamer Oregon.

The Buckeye Bridge & Boiler Works are building a new boiler for the fishing steamer John F. Whitelaw.

Captain James L. Weeks, last season master of the steamer Oregon, is to sail the steamer Cumberland.

James Turnbull, last season chief engineer on the Continental, goes as chief of the steamer W. L. Averill.

Mr R. Thew and Captain C. B. Chapman, of Lorain, were in the city Tuesday to witness the launch of the Cambria.

Messrs. Ward & Jackson, shipsmiths, will do the iron work on the new steamer now building for John Corrigan and others.

Mr. Wise, last year chief engineer of the steamer Siberia, goes in the same position on Captain George Berriman's new steamer.

The Cleveland Shipbuilding Co. is making a new crank, new piston head, boring out the cylinders and putting a new wheel on the tug Cushing.

The steamer Republic, Captain J. D. Mullen, made fourteen round trips with Marquette ore and one trip to Chicago with coal last season, towing two schooners.

Messrs. B. Whitaker & Son, of Detroit, have bought of J. C. Gilchrist and others, the schooner Francis Palms for $16,000, one-half cash, and the balance in one and two years.

Grover & Son are busy fitting rigging and making sails, etc., for Moore & Bartow's two steamers, for Captain Berriman's steamer, that for Palmer & Johnson, and the three steel steamers at the Globe yard.

The launch of the Mutual Transportation Company's steel steamer Cambria was a red-letter day for the Globe Iron Works. Many marine men from Lorain, Ashtabula, Fairport, Sandusky, and other surrounding ports witnessed the event.

The annual ball of the M. E. B. A. No. 2, of Cleveland, will take place at Rhodes' hall, corner of Pearl and Franklin streets, on the 18th inst. Music will be furnished by Freeman & Boston's band, and Mr. Heise will provide the supper. A pleasurable evening is anticipated.

Messrs. Wing & Pellet and other gentlemen have organized a company and will put in a line of two or more steamers to transport lime from Kelley's Island to Duluth. The propellers Russia and Cuba have been named as the boats to be purchased although there is no confirmation of the report.

Captain John Lowe, last season master of Captain Thomas Wilson's steel steamer Spokane, has purchased an interest in the large steamship building by Simon Langell at St. Clair, and will command her. Captain Lowe, will, however, superintend the construction of Captain Wilson's new steamer at Quayle's yard.

Captain J. D. Mullen, last season master of the propeller Republic, has purchased from Captain Robert R. Graves one-twentieth interest in the propeller Calumet for $6,562. Captain Mullen, who has resigned as master of the Republic, will command the Calumet, Captain Graves retiring from the lakes.

Immediately after laying up the steamer George T. Hope work was commenced on her and has just been completed. It consisted of twenty-nine new deck beams, entire new deck, and thorough calking inside and out. Some changes will be made in her cabin joiner work, and in the spring she will come out in tip top shape.

J. P. Swain has been appointed chief engineer of the steamer Republic.

J. B. Miller, last season engineer of the steamer Progress, has been appointed chief engineer of the steamer John N. Glidden.

Captain Hebner, of the steamer Concord has come out victorious in his suit for towing the waterlogged barge Saginaw from Port Crescent to Cleveland in 1884. The case was tried in the Saginaw circuit court during the week and Captain Hebner was given the full amount of his claim, which was $500.

Captains James Channon and Joe Wilson, who have been visiting different ports on the lakes, were in the city yesterday looking after the interests of the new firm of Finney & Channon. Mr. Channon has lately become a member of the firm in Chicago. The business is to be that of shipchandlery and sail making, both members are well known in the business and have had long experience, and no doubt will make a strong team. Captain Wilson, who is quite popular among lake men, is sizing up the vessel trade in provisions for Ford's metropolitan market.

Meteorological summary for the week ending February 2:

Mean barometer	30.082
Mean temperature	27.8
Mean humidity	78.7
Total precipitation, inch	1 51
Prevailing direction of wind	South
Total wind move	1899
Av. clouds	7·13
Av. state of weather	Fair
Max. temperature, highest	46.5
Min temperature, lowest	8 2

WILLIAM LINE, Sgt. Signal Corps, U. S. A.

MARYSVILLE.

Special to the Marine Record.

Captain T. A. Ellery has pulled out the steambarge Point Abino for Messrs. N. & B. Mills of this place, and he is rebuilding her. All they have saved of the old Point Abino is part of her stern and bottom. Her sides are to be six inches thick, of oak. She is to have iron arches on her sides, and is to be made as strong as wood and iron will make her. She is about 14 inches more beam than she was, and will be a better and stronger boat. They have just put in the boiler, so that when she is launched she will be all ready for sea. E.

KENOSHA.

Special to the Marine Record.

Captain W. C. Davidson died at his residence on Grand street, Saturday night January 22, from paralysis. Deceased was born in Dumfries, Scotland, in 1819, and was in his 67th year. In early manhood he was a captain, and in his various cruises visited nearly every country on the globe. He resided some years in Brooklyn, N. Y., where he worked in the navy yard. Came to Kenosha about 20 years ago, where he has always been identfied with the vessel interests. The funeral took place Monday afternoon the 24th, under the management of the vessel men of this city, Father Cleary officiating.

DESERONTO.

There is considerable work under way in the shipyard department. The yacht Norah is being completely rebuilt. The engine and boilers have been removed from the steamer Puritan and she has been otherwise dismantled with a view of converting her into a lumber and wood barge. The Rescue will be fitted out with a new engine, so as to enable Captain Murray to beat, if possible, his record of last year. The Quinte is also receiving a new boiler and other craft are receiving a complete overhauling.

GIBRALTAR.

Special to the Marine Record.

The Detroit Drydock Co. are building a steamer for the F. & P. M. R. R. Co., of similar dimensions, but of different model and construction to their steamers Nos. 1 and 2. She will be named No. 3.

DETROIT.

Special to the Marine Record.

The Western Transit Co. has plans for two steel steamers of large size, prepared by Kirby, of the Detroit Drydock Co., which built the propellers Albany and Syracuse for the line. It is quite likely that these will also be built there.

James Reid, of the firm of J. Reid & Co., St. Ignace, was in Detroit last week on business. The firm are having necessary repairs done on their tugs Mocking Bird and Waldo Avery at St. Ignace, and will have a complete wrecking outfit in the Straits by the opening of navigation.

Captain R. B. Cowan, brother of Captain Thomas Cowan, of the steambarge Ogemaw, arrived here last week from Buffalo. He is looking for a vessel to command next season. He was for nearly thirteen years in the employ of the Oscoda salt and lumber company.

Captain John Kelly, owner of the steambarge James H. Prentice and schooner Goshawk, was in Detroit last week. He intends paying Cleveland a visit before returning to Saginaw.

Jas. B. Purvis, of Detroit, for several years a marine engineer on the lakes, has invented and is placing on the market a patented automatic oiler for oiling crank pins and other bearings. The object of the machine is to oil at regular intervals various parts of the machinery, using a uniform quantity of oil. The machine will be of great service to engineers and steamboat owners. Mr. Purvis will sell his machine through the J. P. Donaldson Co., the shipchandlers of Detroit, to whom inquiries may be addressed.

At T. W. Noble's sail loft work is plentiful. Many sails are being got under way for a number of vessels and several yachts.

The thirteenth annual ball of the M. E. B. A., No. 3, Detroit, will take place at the Light Infantry armory, Thursday evening, February 10. Music by Finney's band.

Bloom & Co., sailmakers and riggers, are making sails and outfit for a new barge building at Mt. Clemens for the Tonawanda line, also making new sails, and doing repairs for a number of vessels.

There is building at the Detroit Boat Works for the Toledo Marine Co., a small steam passenger boat, 80 feet over all, 16 feet beam, 7½ feet deep. She will have a single high pressure engine 14x14, and a return tubular boiler 5½ feet diameter, 9 feet long. She is calculated to make fourteen miles per hour, and was designed by Fred Ballin.

Captain R. W. Hayes, of the steamship Argonaut, arrived at this port from Trenton, Ont., Wednesday morning, February 2d, bringing with him his better-half, whom he married the day previous at the residence of the bride's father, Benjamin Row, one of the wealthiest farmers in that section of the county.

Ruelle & Co.'s tug line have their tug J. L. Miner kept busy all the winter towing ice and vessels to drydocks and elevators.

The schooner John Shaw was taken to Springwells' drydock by Wm. A. Mills' tug Hercules. She will receive a new pocket piece and other repairs, prior to loading at the Wabash elevator with wheat for Buffalo at 4¼ cents per bushel.

C. B. Calder, engineer of the steamship Escanaba, arrived at Detroit Wednesday, to look after the compounding of the engines and the putting new boilers into the steamships Inter-Ocean and Argonaut, which work is being done by S. F. Hodge & Co., Riverside Iron Works.

The Detroit Drydock Engine Works are constructing three triple expansion engines, 20, 30 and 52x40, two of which are for steamships building by F. W. Wheeler, at West Bay City; one for the Detroit Drydock Co., for a composite steamship building at Wyandotte for Captain Peck; one compound engine, 27 and 48x40, for W. B. Morley, Marine City, for the new steamship he is building: one compound engine, 21 and 37x36, for the F. & P. M. R. R. Co., for their new steamer being built at Gibraltar; also, considerable repair work for engines in Chicago and elsewhere. WILLIAMS.

CHICAGO.

Special to the Marine Record.

Your correspondent, while on his usual rounds to-day, found work at Miller Bros.' drydock generally suspended on account of the recent heavy snows, which have proved to be a great impediment to business in all circles, especially marine. We found the steamer City of Traverse still in the drydock, speedily nearing completion, and in charge of a large force of competent workmen. She will receive new steel arches, bulwarks, have her decks and cabins repaired, thoroughly overhauled and put in first-class shape for the coming season. The tug J. W. Parmelee was also in drydock for some repairs to her botton, complete calking and ironing off.

Geo. A. Cameron, bookkeeper for the Vessel Owners' Towing Co., left Wednesday for a visit in the northern part of Dakota.

The schooner F. L. Danforth is receiving extensive repairs in the shape of new stern, 120 feet of new rail, new covering board, stanchions, stringers, and bulwarks.

The market has been very unsteady for the past week, and charters few, with rates the same as at my last writing. Charters made are the steamer Grand Traverse, 44,000 bushels of corn for Buffalo at 6¼ cents; schooner North Cape, 46,000 bushels of corn to Georgian Bay at 4¾ cents; schooner Mary Collins, 18,500 bushels corn for Sarnia at 4½ cents.

A visit to the Chicago drydock finds them very busy, and a large force of men employed. The steambarge Rhoda Emily is being converted into a double-decker; barge Guiding Star, new decks and rail; schooner Charles Luling, top sides calked; schooner Havana, new hatches, and decks calked; barge H. R. Newcomb, new false floor in hold, and calked; schooner Skylark, new center board box, some new ceiling, and general calking; schooner Julia B. Merrill, new center board box, sister keelsons and general repairs; steamer Grand Traverse (formerly Morley), general repairs; steambarge Fayette, lately purchased by W. H. Horn and Captain Rischer, is receiving new timber ports.

Engineer James L. Chase, of the steamer Ohio, and inventor of the Chase fog whistle machine, has been in the city for the past week, having the engine of the Ohio taken out and shipped to Cleveland to be compounded. Mr. Chase speaks very highly of the success he is meeting in the shape of orders, for his fog whistle machine, and indeed it merits success, not only for the labor it saves, but in its independent working it enables the one in charge of the steamer to have the entire time to look after his boat, thereby avoiding many collisions in foggy weather that would inevitably occur. It is a device that will eventually become one of the requirements of the inspection service. BAKER.

CLAYTON.

Captain Richard Daniels died at his home in North Scriba, on the 22 of January. He was born in the town of Mexico in 1823. At the age of fourteen he began sailing on the lakes and at 19 years of age he was master of a vessel. He sailed forty-nine seasons and never lost but one vessel. He was well known in every port between Ogdensburg and Chicago as a faithful captain and an able seaman. He was a member of the Baptist church at North Scriba, where the funeral service was held on Tuesday, the 25th. He was a charter member of the Lycoming lodge of I. O. of O. F. He stayed on his vessel until the fall of 1885, since which time he has failed rapidly. He leaves a wife and two children.

A fine steam yacht, 28 feet long, 4½ feet beam and twenty-five inches deep is being built at Bain's boat house, for W. T. Seymour of Seneca Falls.

MARITIME LAW.

FREIGHT—DIFFERENCE BETWEEN AMOUNT DUE PER CHARTER PARTY AND PER BILLS OF LADING—WHICH GOVERNS—FRAUD—RIGHT TO COLLECT FULL FREIGHT FROM PORTION OF CARGO.

United States District Court, Eastern District of Pennsylvania.

Tagliavia & Company, of Palermo, chartered the steamship Kalo for a lump sum of £1224 to load for either Boston, New York, Philadelphia or Baltimore. There was to be the port of discharge, but if charterers desired they could send the steamer to a second port on payment of an additional £150. The charter provided that the vessel should have "an absolute lien on the cargo for all freight, dead freight and demurrage due to the steamer under this charter party." Tagliavia & Company loaded the ship for Boston with fruit, for which the master signed one bill of lading, agreeing to deliver the merchandise with "freight as per charter party and all other conditions." They also presented the master with a bill of lading for 600 tons of sulphur to be delivered at Philadelphia. This the master declined to sign, as he was bound for Boston, and the charterers finally took a simple receipt for the sulphur. Tagliavia & Company sent to the consignee of the sulphur in Philadelphia a bill of lading in which the shipper's name was given as Fratelli Jung and which bore the signature." For the master, the agents, Tagliavia & Company." This bill was signed without the knowledge or consent of the master. It did not refer to the charter party and called for but $586.80 freight. The steamship carried the freight to Boston and collected £960 freight as per bill of lading. She then took the sulphur to Philadelphia, where, according to the charter, there became due the vessel the balance of the charter money, £264. Extra compensation for loading at an extra port, £50, demurrage £30, proceeding to Philadelphia £150, in all £494, or $2780. This the consignee of the sulphur refused to pay on the ground that he knew nothing of the charter party and had no notice of what it contained; he tendered the amount named in the bill of lading $686.80, which the master refused to receive and attached 200 pounds of the sulphur for the whole sum due the vessel under the charter party. Held, that the master was entitled to collect of the consignee of the sulphur the entire amount.

Butler, J.

It was the master's duty as between himself and the charterers to collect the entire freight secured by the contract for any part of the cargo. He might apportion it ratably to every part and then collect it from the whole, or allow a part to escape and collect the entire sum from the balance. There can be no doubt of this. That such right was intended to be vested in him appears from every expression in the contract, relating to the subject. While he bound himself to sign bills of lading as presented by the charter, he stipulated that the signing should not be "without prejudice to the charter, the owners having an absolute lien on the cargo for freight due under the charter." It was important to the master that he should not be required to apportion the freight which would be difficult and embarrassing, even if unattended with risk; but it was of no consequence to the charterer whether it be collected from the whole or a part.

"Notwithstanding, however, such was the master's right, under the charter, he might waive it or estop the enforcement of it, as respects others. The acceptance of cargo as by general ship, from one ignorant of the circumstances, or signing bills of lading inconsistent with the charter, would doubtless estop him, as respects that part of the cargo. For the fruit, sumach, and macarroni the master did sign such bills or rather authorized them to be signed in his name, and these bills of lading being transferred to others, carried this part of the cargo, subject only to the freight specified therein. The purchasers were authorized to deal on the basis of the freight specified and would be defrauded if required to pay more. I say this with great confidence, notwithstanding some expressions found in Gracie vs. Palmer, 8 Wheaton, 605. While this case goes great lengths to sustain the ship's right under charter, it does not, I think, contain anything calculated to cast doubt on the truth of this propostiton. The master's right therefore is lost as respects all cargo except the sulphur.

Why should he not be allowed to collect the freight due from this? He did nothing to restrict his right respecting it. The bill of lading held by the respondent is fraudulent and effects no one but the charterer who dishonestly signed it. It served to transfer his right in the sulphur but has no other effect. That the master's name was used without authority, is proved; and is no longer questioned. It is urged however that the master was remiss in receiving the sulphur under the circumstances attending its shipment, and thus "rendered the fraud possible." But the fraud would have been possible, and equally probable, had the master done otherwise No care on his part could have prevented the issuance of the fraudulent bill. Had the master signed the bill presented, with proper reference to the charter, the perpetration of the fraud would not have been rendered more difficult. He could not refuse to accept the merchandise. He was bound by the contract to carry it, and when the charterer consented to take his simple acknowledgment of its receipt, and undertook to transship it at Boston nothing further was necessary. The transaction was completed as contemplated by the charter.

It is assumed that the sulphur was owned and shipped by Fratelli Jung; that the master knew it; and should therefore have informed him of the charter and its terms. But neither assumption is supported by the evidence. Not only is it not shown that M. Jung was the owner, but it is shown that if he was, the master did not know it. The master swears he did not; that he never heard of such a person, and this testimony is unanswered. The probabilities are against the assumption even of such ownership. The circumstances tend to show that the sulphur, as well as the balance of the cargo, belonged to the charterers. The fruit, sumach and macarroni were shipped by him and a bill of lading taken in his name. He dealt with the sulphur as his own, had it in his possession, and assumed and exercised absolute control over it. The master knew no one else in the transaction. It now appears, however, that Fratelli Jung was inserted in the bill presented.

The master, as he testifies, did not observe this, but rejected the bill because Philadelphia was named as the place of discharge. It is probable that the charterer purchased the sulphur from Mr. Jung and intended to use the bill as a means of payment and being disappointed by the master's refusal he resorted to the fraud practised. As before remarked the bills of lading contemplated by the charter, were intended to be used as acknowledgment merely of the receipt of the cargo. An ordinary acknowledgment would have answered as well; and when the bill for sulphur was refused, the charterer proposed and took such acknowledgment.

Wherein then was the master remiss? The charterer having possession of the sulphur, exercising the right of ownership, and shipping it under the charter, the master was bound to carry it and there was nothing to call for protest or inquiry, as urged by the respondents. The same might be said if it appeared that the sulphur belonged to Mr. Jung; and the master knew t. In such case the charterer must be regarded as his agent, binding him by whatever was done.

The agent knowing all the circumstances and shipping the merchandise under the charter, the principal would be bound as if he had shipped it personally. A charge of remissness could more easily be sustained against the respondent, and those who preceded him as transferers of the bill. They knew that its validity depended on the charterer's authority to execute it; the burden of proof respecting this rested on them. Inquiry would have revealed the fraud and avoided the loss which followed.

What has been said disposes of the entire case. Respondents standing in the charterer's shoes—having his rights and nothing more—must submit to payment, not only of the balance of freight due under the charter; but also to all other charges which could be enforced against the charterer; that is to say, the charges for visiting a fifth port for loading, for detention there, and for carrying the sulphur to Philadelphia.

About the latter charge I had some doubt at first, but a more familiar knowledge of the circumstances has removed it. Both shipper and respondent intended to have the sulphur carried to Philadelphia. The latter purchased it with a view to delivering it at this port; and it is improbable that he would have consented to its discharge at Boston. Although the charterer had promised to transship it there he did not intend doing so, and when the ship reached Boston the master was seriously embarrassed by the circumstances that he could not get rid of it there. He was not required to hunt the respondent up, but was fully justified in proceeding to Philadelphia, where he knew the respondent expected it.

LEWIS' MARINE MANUAL.

Just the book for our mariners, engineers, etc., to read during the winter months. Contains reports and references respecting nearly 1,000 cases of collisions, ship wreck, accident, etc., etc., occurring on the great lakes and ocean some of them reported in full. Highly recommended by captain Gordon, R. N., Captain Drake, Captain Harbottle and other prominent marine authorities.

Subscride for the MARINE RECORD.

SAN JOACHIN VALLEY.

TRACY, CALIFORNIA, January 26.

Special Correspondence of the Marine Record.

Your valuable paper comes as regularly to us on the Pacific slope and is quite as interesting to me as when I was your correspondent for the St. Lawrence river. I do not forget the sailor men and the hard trial they underwent during the storms of 1886. Many of them have gone to their long home, and those who survived put their hands in their pockets and gave a mite to the poor widows and fatherless children whose protectors are among the lost. Many improvements can be made to lessen the loss of vessels and men. If owners would use oil upon the waters it would add greatly to the safety of crews. I am pleased to read of one captain on the lakes who had the sand to try the experiment of oil, which doubtless saved his vessel. You shall teach others how important it is. The government should put in more life saving stations on the lakes and also furnish them with horses, as many times they have to go some distance to save a shipwrecked crew. Thanks to the heroes who braved the billows last fall and saved so many lives.

There is another thing shipowners should think of; that is the last trip. He has no thought of his crew. Perhaps the vessel is an old hulk, well insured. Let her go, she is well sold. The government should appoint a good man for each port to inspect vessels and not let an owner load an old vessel that is not fit to go outside. Many a vessel goes down with her entire crew that is not fit for kindling wood.

Another great point should be attended to by Uncle Sam, and that is the steering gear of our steamers and vessels. As the RECORD says, many a man sails in different vessels during the year, and their steering gear is different; no wonder there are so many mistakes in vessels running foul of each other. They should be all made to steer alike, which would lessen the danger. Many new ideas could be put into use to help save the noble ship and her crew.

While the readers of the RECORD, on the lakes, are snow-bound and ice-bound, the thermometer down below zero, the sailors sitting around the big coal stoves telling their yarns, it is warm and pleasant in the San Joaquin Valley. We can go with our coats off. When Captain D. P. Dobbins, superintendent of the ninth life saving district, comes to California he will find the weather more delightful than in Buffalo. I see items from Clayton, N. Y., frequently and enjoy them. Wishing the RECORD a successful season, I am yours truly,

J. T. BENJAMIN.

P. H. MADIGAN MISSING.

Special to Marine Record

Patrick Henry Madigan, whose family lives in a little town, called Oakville twenty miles west of Toronto in the Province of Ontario, Canada, is missing. His wife says he left the schooner Thos. Quail in September last, then made a trip in the Ed. Kelley. That is as far as she knows of the boats he was on. She received a letter from him dated Washburn, 15th November, saying he would leave there that day and would be home in about two weeks, but did not give the name of the vessel or boat he was going on, or it may be he never left on a boat at all; that is, he may have gone to work in an iron mill or lumber woods; any way, since that date his wife has heard nothing of him and she is in an awful state of excitement. She is now in almost destitute circumstances and prays you for humanitie's sake, to do what you can through your "sailors' friend" the RECORD, to get some trace of him. You might ascertain if there was any schooner, barge or boat lost, that left Washburn that day, or give any imformation you can get. A.

[If any one can give information of the loss of a vessel or sailor from any vessel which left Washburn on the 15th of November or thereabouts please address this office or Mrs. Henry Madigan. Oakville, Province of Ontario, Canada. It is barely possible that Mr. Madigan shipped on the schooner Lucerne, as she discharged her cargo of coal at Washburn and cleared on the 15th of November for Ashland to load ore. Her crew, in a measure, consisted of boys and Captain Lloyd, probably fearing heavy weather on the way down, made this addition at Washburn. There was but one other vessel at Washburn at the time, the steamer Columbia, Captain Peterson. The captain says he did not ship any man at Washburn. So it may be believed that Mr. Madigan lost his life on the Lucerne, as one of the bodies taken from the rigging has not yet been recognized.—ED.]

A dispatch from Buffalo says: As the marine season approaches again the expectations of vessel owners appear to expand and the price of vessel property steadily goes up. There is still plenty of it in market, but the prices asked are far beyond what the same vessels could have brought a year ago. Enthusiastic vessel owners are talking of fabulous gains next season. They are not going to make any carrying contracts yet. One owner stated that vessels would not accept $1.40 on ore from Escanaba, and ventured a prediction that the new Ashland and Marquette districts would be paying upward of $3 before next fall. Already the lines are being drawn looking to a booming season from the first. The interstate commerce bill is now expected to become a law, and it is generally held that this alone will draw a large amount of trade from the railroads to the lakes. You will see Buffalo go ahead next season as she never did before," said a vessel owner, just from her lake trade, and she is booming now. If the bill passes vessel property will be away up from what it is now. I know that the propeller lines are making all their calculations for this state of things, but they deny the facts."

BULKING GRAIN.

The special committee of the Merchants' Exchange, appointed to confer with the grain dealers and elevator authorities on the question of bulking grain, met last week and held a long conference. The grain committee and representatives of the elevators were also present and the subject was thoroughly canvassed. The discussion was very animated, and appears to have been entered into with a will by the members of the special committee especially, as it was composed mainly of strong advocates of bulking the grain. The only action taken was the passage of a resolution declaring it the sense of the meeting that No. 1 hard Duluth wheat should be bulked, and asking the elevator authorities to bulk it. The The committee voted unanimously in favor of the resolution, but the elevator representatives, claiming to act for others who might think osherwise, did not vote.

The discussion was so earnest that it was continued after the meeting adjourned. The advocates of bulking maintained that they were certain to carry their point this year, and some of them went so far as to say that if the present elevating company would not yield to the pressure there would be a new one formed that would. It was also argued that the company could not afford to reject this request. It was so generally joined in by the grain interests, and the elevator men were so divided against themselves that the company would certainly go to pieces if bulking was not adopted. Car grain, it was said, was already being bulked in more than one elevator.

The request will be considered by the elevator authorities, and if possible a reply will be made at the trustee meeting next Thursday.

The grain dealers who are not owners of elevator property are watching the stir in the line of added storage capacity and are beginning to cipher out a possible rupture of the elevating association which would, of course, insure a reduction in rates. The Frontier, Lake Shore, International, and Coatsworth elevators will all be out of the company at the opening of navigation, no doubt, and if changes are made in the other houses there will have to be a readjustment of shares at any rate, so with a disturbing element within their ranks and a larger one outside the rate question will be carefully watched by the grain men.

That there is going to be a scramble to get hold of an increased share of the lake business appears to be certain. Everywhere the belief seems to be that the season is to open with a boom and he who is not prepared to strike in will get left. Captain A. A. Swan, who has been in Chicago surveying craft on the Illinois canal for the Continental insurance company, has returned. He reports an activity there that amounts to something of a craze. Everybody is eager for the season to open.

The Merchants' Exchange committees on grain and grain inspection were in joint session this week, talking over the appointments to the office of chief inspector and weighmaster, which was not made at the trustee meeting last week. There is no dissatisfaction with the present appointees, but some changes in the offices themselves are proposed. As both are paid by fees they are neither an expense nor a revenue to the Exchange, and the weighmaster is hardly more a Merchants' Exchange official than that his appointment is a statement of an entire confidence in him. There has been an effort to make the weighing an official matter. If this "official" idea is adopted the weighmaster will have to weigh the grain out of the elevators as well as in, and probably become responsible for his work, just as the inspector now is for his grading. Since the disclosures of questionable practices in one of the elevators there has been an additional demand made for official weighing, and some of the new elevators have alrealy adopted it.

The transactions of the committees, being only advisory to the trustees, were not made public, but it was learned that the present officers, Mr. Junius S. Smith, weighmaster, and Mr. Conway W. Ball, chief inspector, were recommended to reappointment. An objection raised to the amount of the latter's profits about $4,000 a year, was overruled, and the recommendation was that he be reappointed on the former basis.—*Buffalo Express.*

HE CURED HIM.

To the Editor of the Marine Record:

Captain "Briney" Gray, of this city, stutters considerably at times, especially if he has had a glass or two of Moxie.

While crossing the viaduct a few days ago, he met a friend who is similarly affected.

"W-where are you g-going, Mac?" asked Briney.

"I'm g-g-going over to D-d-doctor Brown's to see if he c-c-an't st-t-top my st-t-tammering."

"He's g-g-good at that," replied Briney; "and d-d-don't you forget it. He c-c c-cured m-m-me."

MARTIN GALE.

A BOOMING BUSINESS.

The Buffalo Express says: As the marine season approaches again the expectations of vessel owners appear to expand and the price of vessel property steadily goes up. There is still plenty of it in the market, but the prices asked are far beyond what even the same vessels could have brought a year ago. Enthusiastic vessel owners are talking of fabulous gains next season. They are not going to make many carrying contracts yet. One owner stated yesterday that vessels would not accept $1.40 on ore from Esca aba, and ventured a prediction that the new Ashland and Marquette districts would be paying upwards of $3 before next fall.

Already the lines are being drawn looking to a booming season from the first. The inter-state commerce bill is now expected to become a law and it is generally held that this alone will draw a large amount of trade from the railroads to the lakes. "You will see Buffalo go ahead next season as she never did before," said a vessel owner, "just from her lake trade, and she is booming now. If the bill passes vessel property will be away up from even what it is now. I know that the propeller lines are making all their calculations for this state of things. They do not deny the fact."

"It seems too bad that the Union line sold those five propellers last fall. Now it must put two new vessels into the Lake Superior line and it is going to be crippled in its Chicago trade as far as I can see."

"Don't you be troubled about that," was the reply. "The Union line can get vessels. It is already figuring on the charter of the four propellers of the old Commercial line, the Cuba, Russia, Colorado, and Nebraska. Of course it may not lease them, but I know that there is talk of it and if it is not done it will be because the line can do better in some other deal."

"No, So-and-so is not building another steamer," said another owner, "and the reason is because he can't find a yard to do the work. They are all busy. To be sure the Union dry-dock is not building anything in wood, but there is reason enough for that in the fact that ship timber is so scarce."

ADVICE TO A BOY.

"Seth G.," of Virginia, writes: "I have determined to be a sailor on the lakes. I am fifteen years old, and I want to ask you how much pay sailors receive, and how I can get to be one?

Exactly, my boy. If you have determined to become a fresh or salt water sailor the best thing that could happen you would be to give you a chance. Your writing is terribly poor, and it is evident that you have no desire for education. It is quite probable, too, that you intend to run away from home. However, come right along. Some dark night about April 1 tie your clothes up in a red bankerchief, let yourself down on the roof of the woodshed, and drop to the ground with a good-bye to the old home. You can walk to Cleveland, Toledo or Detroit in about four weeks, and by living on bones and crusts and sleeping under straw stacks and fence corners you will get toughened up to the sailor business quite a little. When you reach one of the lake ports named just walk down to the wharves and say to the first captain you meet:

"Say, captain, I've run away from home to become a sailor. I want to plow the raging main on your schooner. Will you take me?"

The chances are that he will. You'll sign articles for the voyage or for a month, and in about three minutes after you have put your name to them the plowing will begin. You'll do more hard work in a day than you have ever done in a week. It won't take you long to discover that you have a boss. He is called the mate, and it won't make any difference to him whether he hits you with his fist or uses the end of a rope to tickle your back.

You will be the drudge and the dog for the ship, and any hesitation about obeying an order will bring you a kick or a cuff. You probably imagine yourself wearing a sailor's hat, silk necktie and flowing pants, and you dream of loafing around and listening to yarns from old Bill the pirate. Just wait, my boy. Your pants will flow with holes and patches, old Bill won't be on that ship, and when the mate catches you loafing around he'll stir you up until you think of bumble-bees.

The fare may possibly be as good as you get at home, while the pay of a veteran sailor is about the same as a veteran ditch-digger. It's all right to read about the "heaving sea" in poetry, but when the heaving ship heaves, a boy about your age will wish for his bed in the chamber of the old Virginia homestead. You may see the sun rise out of or sink in the lake, but you'll have tar on your hands, an ache in your back, and the mate close behind you. You'll see gulls, but the smells of the dark forecastle will make you forget the gull question pretty suddenly. Maybe they'll let you have a hammock, but after you are called out of it at midnight to go aloft in a gale and hang on with toes and eyelids the romance will disappear.

How do I know? Didn't I try it once upon a time? Yes, I did, and it didn't take two days to convince me that "plowing the raging main" was the hardest plowing any human being ever tried. If I hadn't sailed I should want to be a sailor. Nothing will do for you but to try it. Make your arrangements, therefore, and if you are not drowned on the first voyage, and can find your way back to Virginia, you'll return home and be willing to turn the grindstone all day long.—Detroit Free Press.

PROPULSION OF VESSELS.

Engineer J. Bender, of Toledo, writing to the Scientific American says: In your last two issues, I find a controversy about propelling ocean steamers by means of steam jets. It seems to be very strange that neither of these two gentlemen says anything about where to get the water from to generate the steam. On account of heavy incrustation of the salt water, the boilers would be injured, and I don't know whether they could purify enough water for all those boilers necessary to generate the steam. But as a source of safety, I think an auxiliary arrangement of a hydromotor would be very valuable. In case of breakage on the screw, shaft, or rudder, the hydromotor would be, it seems to me, just the thing. With sufficient capacity, the vessel could certainly make about eight or nine knots per hour, and this would be enough to bring her to some harbor in safety. Two-screw vessels, of which there is so much talk lately with ocean steamers, is nothing new. We have had them here on the lakes for nearly thirty years. Even if it would cost a little more to run two screws, I think they ought to be inaugurated on the ocean, for two are safer than one. We have here a small pleasure steamer, the Mascotte, with two screws, worked, of course, by two separate engines. She lost one of her wheels twice during the summer, but could run very well with one. With an ocean steamer, safety is the main thing, but it seems it is the last thing shipbuilders or companies think of.

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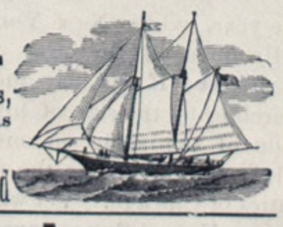
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No 4. Fast Limited Express	*2 55 A M	*3 05 A M
No 8, N Y, B & A Express	*8 25 A M	*8 55 A M
No 26, Elyria Accommodation	†7 45 A M	.....
No 24, Buffalo Ac'm via Sandusky	†10 30 A M	†10 45 A M
No 24, Toledo Accom via Norwalk	†10 30 A M	†10 45 A M
No. 10, New York "Flyer"	.....	*12 noon
No 12, N Y & B Fast Express	*2 10 P M	*2 45 P M
No 2, Night Ex via Norwalk	9 40 P M	†10 00 P M
No 22, Night Ex via Sandusky	†9 40 P M	.....
No 26, Conneaut Accommodation	†4 25 P M	.....

Westward.	Arrive.	Depart.
No 1, Fast Limited Express	*12 15 A M	*12 25 A M
No. 23 Cleveland Express	*2 15 A M	
No 3, Chicago Express via " "	‡5 20 A M	6 35 A M
No 25, Mich Accom Norwalk	.....	†6 30 A M
No 21, Toledo Ex via Norwalk	†12 50 P M	†3 20 P M
No 5, St Louis Ex via Sandusky	*10 45 A M	*10 50 A M
No 9, Chi Pac Ex via Norwalk	•6 15 P M	•6 40 P M
No 31, Elyria ac to Elyria only	.....	†4 30 P M
No 27, Conneaut Accommodation	†8 10 A M	.....

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Buffalo Passenger	*10 40 A M	*10 45 A M
Chicago Passenger	*9 10 P M	.....
Local Freight	* 4 40 A M	* 5 45 P M
WESTWARD.	Arrive.	Depart.
Chicago Passenger	.....	*6 30 A M
Fostoria Pascenger	*4 46 P M	*4 51 P M
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A. A. POMEROY, EDITOR AND PROP'R

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Subscribers and others are respectfully invited to use the columns of the MARINE RECORD for the discussion of pertinent topics.

Entered at the Post Office at Cleveland as second-class mail matter.

CLEVELAND, O., THURSDAY, FEB. 3.

NADEQUATE LAKE PROTECTION.

It is the maxim of Bismarck and men like him that the best way to secure peace is to be ready for war. A homelier way to put the same theory is that though the house may not be robbed, at all events there is no harm in keeping the bull-dog on the chain. As the French have it, "it is only the impossible that happens."

The angry feeling which has existed for many months past between Canada and the United States with respect to the exact interpretation of the Fisheries Treaty of 1818 between Canada and this country has at last culminated in a manner which, it is just possible, may lead to war. Level-headed people scout the idea that there will be any war between Canada and the United States; but nevertheless circumstances indicate at least the possibility of such a deplorable state of affairs, and it is well to be prepared for the worst. Feeling at present is running high in Canada against the United States, and an Ottawa dispatch states that a circular has been received from the British admiralty authorities calling upon all naval volunteers under fifty-five years of age to hold themselves in readiness for active service—an action which, it has been observed, has only been duplicated once since the Crimean war, and that was during the anti-Russian war scare a few years ago. Professor Goldwin Smith, also, who is certainly one of the ablest publicists in the Dominion, has come out with a very bitter, sarcastic manifesto against the States, which he says, does not quite yet inherit all the virtues and integrity of the Anglo-Saxon race which founded the American nation.

The Canadian government, doubtless honestly believing that it was acting strictly according to treaty rights, has been causing an immense amount of worry and expense to the fishermen of Maine. American vessel after vessel has been seized on the ground that they were encroaching upon Canadian waters. The negotiations that passed between the governments of Great Britain and the United States evidently pointing to no satisfactory settlement of the questions at issue, Senator Edmunds introduced what has been aptly called the retaliation bill, which practically forbids commercial relations between the Dominion and this country. The claim of the United States fishermen is "that they have never desired to take, dry, or cure fish within the limits prescribed by the convetion (of 1818), that they have not done so, and that not one of the vessels seized last summer was violating the provisions of the treaty." They found this upon the article in the treaty which provides "that American fishermen shall be permitted to enter such bays or harbors for the purpose of shelter and of repairing damages therein, of purchasing wood, and of obtaining water." In availing themselves of these treaty privileges, it is alleged that American vessels were seized and American fishermen subjected to grievous persecution. That is how the matter rests at present. It is, as Sir Lucius O'Trigger would say, a very pretty quarrel as it stands, and it would be a pity to spoil it, but it is evident that new international regulations will speedily have to be made which will prevent Canada and the United States in future cutting their own throats by crushing a trade which has hitherto been worth millions of dollars to each country. If expressions of opinion, made by government ministers in the British parliament, are worth anything, there will probably be an end to the trouble very soon. These statements are to the effect that the discussions between the government of England and that of the United States on this vexatious fishery question have been conducted in the most friendly spirit, and that an earnest effort is being made to bring about peace between the quarreling parties. They are in all likelihood true, because in the event of Canada making hostile movements, England would, in honor bound, be compelled to support her feudatory, and at the present moment, with European and domestic politics in their touchy, inflammable shape, no English government would dare to countenance a war between Canada and the United States.

However all this may be, the passing of the Edmunds bill has brought to the front a question of the very gravest importance to the population on the northwestern lake system. A New York paper has raised the cry that if war is imminent then the navy of the United States is notoriously incompetent to deal with the emergency, and wants forthwith a large grant for the construction of more fortifications and more ships of battle for the protection of the Atlantic coast. Although there is an element of pessimism and jingoism in the cry, there is a certain amount of justice in it. In comparison with the naval power of other nations, and especially England, the navy of the United States is singularly weak for the task of protecting our commerce. It has been boasted that the little republic of Chili could devastate the Pacific coast if she chose so far as any power of the United States navy to prevent her is concerned. But if appropriations for purposes of defense against a foreign foe are demanded, why should means of protection be limited to the Atlantic seaboard? Are the United States vulnerable only from that side? Is there no northwestern frontier to guard? Is there no lake traffic to protect? These questions can not be answered in the negative. The United States are singularly vulnerable along the northwestern frontier; and the traffic on the lakes is of gigantic proportions. This season there will probably be vessels representing, in the aggregate, 900,000 tons, employed on the different northwestern lakes. It is doubtful whether the lake traffic is not as important to the United States as the Atlantic trade. In the year ending June, 1884, according to official statistics, Baltimore received and cleared 4,883 vessels; Boston, 6,950; New York, 17,172; New Orleans, 2,268; Philadelphia, 3,912; Portland and Falmouth, 1,664; and San Francisco (which is mentioned, although, of course, it is not on the Atlantic coast), 2,430. The total for all these great ports is 39,279 vessels. Yet in that same year one lake port alone—namely, Chicago—received and cleared 24,737, so that Chicago had 2,630 more than the combined aggregate of Baltimore, Boston, New Orleans, Philadelphia, Portland and Falmouth, and San Francisco; 615 more than Boston and New York put together; 414 more than New York, Baltimore and New Orleans; and 1,223 more than New York, Philadelphia and San Francisco. The tonnage arriving and clearing at Chicago amounted to 7,518,696 tons; in New York, during the same period, it was 14,925,541 tons; and these results were attained in spite of the fact that the lake port is open for traffic only seven months in the year, while New York port is practically open all the year round. *Ex pede Herculem.* If you may judge the stature of Hercules by the size of his foot, the magnitude of the traffic on our lakes may certainly be judged by the custom house statistics of Chicago. Yet what has been done by the United States government to assure safety to that gigantic commerce? Absolutely nothing, for the furtive appearance of a revenue cutter by no means implies security. There is not a fort worth speaking of upon the lakes, and there is not a gun that could be fired at an enemy without the probability of as much damage being done to friends as foes. Is this condition of affairs right? It may have appeared all right when a halcyon friendship existed between the United States and Canada, except for the little frictions that occurred now and then over bank cashiers and New York boodle aldermen; but can it be considered right now, when war is actually being talked about and may be precipitated at any moment by popular passion or blunderbussed om atic stupidity?

A few weeks ago the RECORD quoted from a New York contemporary (which seems to have anticipated the important question arising out of the Edmunds retaliation bill) an article which tried to ridicule the idea that the lake cities were defenceless. It stated that on the whole Canadian frontier, from the Bay of Fundy to the Pacific, "the Canadians do not possess a single fortification of any kind, nor is there one gun mounted in all that distance." It acknowledged that there were hundreds of British gunboats that could be let loose upon the lakes, but argued that the Canadian canals were not built for war purposes, and that even if they were British gunboats could not slip into American lake waters without being smashed by United States troops. We wonder what our contemporary's idea of Canadian geography can be. Has Montreal no guns and no fortifications? Has Quebec none either? We had hitherto fancied that Quebec was one of the strongest and best garrisoned fortresses in the British empire. It certainly lies on the Canadian frontier "between the Bay of Fundy and the Pacific." The argument that there are no fortifications on the Canadian canals entering the lakes is absurd in the face of the fact that these canals are owned and controlled by Canada and could be used for war purposes whenever it was deemed necessary to do so. The United States could have no voice in the matter unless their troops invaded Canada and took possession of the canals—an operation which might not be very easy, because it would be precisely at such points that a strong force would be assembled in the event of hostilities. Again, there are hundreds of Canadian ports on the lakes from which gunboats could be launched. It would not be necessary to build the gunboats, either, because there are known to recent military science the means of transporting overland handy little war vessels in sections. And again, as to the improbability of any British gunboats being allowed to slip into the lakes without being destroyed in the event of a declaration of hostilities, it must be borne in mind that preparations for war are made nowadays before the actual declaration of hostilities. Long before the Franco-German war broke out Prussia had been quietly massing and mobilizing her troops along the Rhine frontier, and she won the conflict by her state of preparation. If Canada intended to fight the United States, she would take good care to send her gunboats into the lakes first. She would be a fool if she didn't.

There is no use talking. The lake cities are not protected as they ought to be. The matter is not one which concerns the northwestern lake commerce alone. It concerns the whole United States, because the unprotected state of the lake cities invites invasion of the entire country. We can not have Commodore Perry always to stave off the enemy as was so gallantly done in the battle of Lake Erie in 1813.

"GOING RATES."

The communication of General O. M. Poe to the Secretary of war in regard to the improvement of the Saint Mary's canal, and the interest with which it has been considered by that official, shows, in a great measure, the importance of the Lake Superior trade. In fact, the mineral wealth of the Lake Superior region which feeds lake carriers is beyond computation and the agricultural products are the finest in the world. As the country west of Lake Superior becomes populated the demand for lake transportation will continue to increase. This condition has been forseen by railroad managers and they are now bent on taking advantage of it in every way possible.

It has been said that we are building to much tonnage, this winter, but that is not true, as has been frequently asserted in these columns. It will be impossible even if we take advantage of all the facilities at all the shipyards on the lakes to put new tonnage afloat to take care of the merchandise that will be offered for transportation next season. There is so much to move that the lake fleet can not do it, with the best dispatch. Last season we had the largest carrying business ever known, owing principally to favorable sailing season and good dispatch; we can not, therefore, expect to do any more with the same tonnage the coming season. It is evident that there will be at least 500,000 tons more ore to move than last season, which will give employment to more vessels than can possibly be put afloat. In the grain trade Duluth can take care of all the new tonnage to come out, besides shipping as much as last year. It is well known that Duluth, Washburn, Ashland and other Lake Superior ports have been short of coal during the past winter. The railroads have been experimenting with coal mined in that region and are heartily sick of it. They want Lake Erie coal. The stock of good coal was sold out before navigation closed and Duluth was 400,000 tons short in supply. With this in view and the knowledge that there will be about 400,000 ons of grain, etc., to go east more than last eason it can be readily seen that the new tonnage, about 10,000 tons in excess of that of last season, can be taken care of by Duluth. There is now in store in Duluth elevators about 10,000,000 bushels of wheat, about twice the amount at that point last year, and all the elevators in the country will be filled, including elevators now under process of construction. The preparations at ore receiving points on Lake Erie attest the fact that in order to provide for the increased demand for that product the best dispatch must be given to vessels, the re m en thereby acknowledging the truth of the statement that the present lake tonnage is inadequate to the demands that will be made upon it. In order to provide for the certain increase in demand for Lake Erie coal, capitalists at Lake Superior ports are largely increasing their dock facilities, and it is safe to say that at the port of Duluth alone there wil be, by the opening of navigation, about three times the storage room that was available last season.

We do not desire to make this paper obnoxious to shippers, neither do we desire to mislead vessel men, but under the system that has prevailed for some time of owners and agents chartering at what is termed as "going rates," some one is going to be entrapped. It is not wise to tie up at "going rates" with the liberal prospects in view. There is no combination that can defeat or change the present promise of a good season in 1887, and owners should not be too eager to charter even at "going rates." It is generally understood that the greater part of the tonnage is covered by the indefinite terms however." This is simply giving to the enemy a victory already won. The ore men are in perfect accord with each other, and their number is comparatively small and centralized; they can reach an understanding much quicker and hold themselves together with more tenacity than can the vessel owners. It is therefore possible, as we have said, that they may be able to find some one who can conveniently make the going rate according to the ore man's views and thus secure the transportation of an immense amount of ore at rates which do not now meet the views of the carriers.

WE do not desire to cast cold water on the war sensation of the eastern dailies, but must say that there is not a gun boat in the English navy that can reach Lake Ontario through the St. Lawrence system of canals. If the English want gun boats on the lakes for purposes they must transfer them in sections or build them in Canadian ports. We do not wish to be misunderstood as saying that they have no boats with light enough draft but that in war everything is fair, although we do not apprehend that there will be war with our neighbors across the border.

IN order to deprive the report that charters for the transportation of ore from Marquette have been made at $1.60 of its sting we reassert that the engagement is a compromise one and should not enter into the calculations of owners of vessels. There is not the slightest reason why any other vessels should be put in at that rate and we firmly believe that there will be none, but that the season will open with a $1.75 rate and continue to rise to the end.

A CIRCULAR has been received at Ottawa and other Canadian ports, from the British admiralty, calling upon all marine pensioners under fifty-five years of age to hold themselves in readiness for active service. The circular also requests an immediate answer as to age, whether the pensioner is a long service one or is invalided, whether a gunner or torpedo artificer, and to state the nearest ship-of-war where he could attend for examination.

MISS MARY, daughter of Captain L. L. Slyfield, was united in marriage to Captain J. C. H. Pringle at St. Clair, Mich., on Wednesdy, 2d inst. We wish the happy couple much prosperity and pleasure.

IN naming Captain John Sutton as the master for the propeller B. W. Blanchard last week we made a mistake, as Captain W. D. Waite, late master of the propeller Oneida, has received the appointment.

WANTED.

Steering wheel for tug, 4 feet 6 inches or 5 feet 6 inches. Also a metallic boat. Address
222 Maple Street, East Saginaw, Mich.

LAUNCH OF THE PROPELLER CAMBRIA.

Notwithstanding the keen, frosty wind on Tuesday afternoon, quite two thousand people assembled to witness the launch of the steel steamship Cambria, built for the Mutual Transportation Company by the Globe Iron Works Company. No accident of any nature marred the event, and the symmetrical hull glided into the waters of the river on time. This is one of four steel steamers to be built for the same line by the Globe company, and, although the Cambria is beyond reproach new features will be added to the others. They will be twelve feet longer. It is the intention to make the next steamer, which will be laid down during the summer, the standard for the line.

The material entering into the construction of the Cambria is all of Cleveland production, Otis furnishing the iron and steel plates and the Cleveland Rolling Mill Company the forging.

Length of keel 297 feet over all 280 feet and 5 inches, breadth of beam 39 feet, depth of hold 24 feet; between the spar deck and the main deck, 8 feet; and the lower hold about 13 feet. The plate on the bottom and up to the second strake above the turn of the bilge is steel. There are five strakes of iron on the sides, her sheer strakes being double, 44 inches wide, and of 11 16½ inch steel width through and through. The plating on the boat is all 11.62½ inch thick Half-inch iron is the lightest on the boat, and she carries this thickness throughout, although it might be lessened on one-third of her length. All steel frames, 24 inch centers, run to the luff of the bow. Then they begin to narrow up at 22 and 20 inches, and from the collision bulkheads to the stem they are 13 inch centers. The depth of the water bottom is 3 feet and 4 inches, and it is divided into six compartments, three on each side, with five bulkheads in the lower hold. The collision bulkhead runs to the spar deck. The others run to the main deck, with the exception of the boiler room bulkhead extending to the spar deck and terminating in an iron boiler house. In case of a collision the boat is provided with three iron decks in the fore side of the collision bulkhead and four tiers of keelsons on each side. Another very heavy stringer, 18 inches wide, runs parallel 8 feet from the main deck. The space between the stringer and the top of the water bottom is divided, and another 9 inch deck beam is put in as a side stringer. A wooden deck extends the width of the hatches, being encircled by a 6 foot 6 inch plate of ½ inch steel. Iron bulwarks extend 70 feet aft from the stem, and the same is the case from the stern to the fore side of the boilers. The remaining bulwarks are of wood, with iron stanchions. There are no stanchions aft or headgear forward. The Cambria will have three spars, with standing gaffs, to be used as derricks in handling cargo, but will carry no canvass. Her fitout will be furnished by Grover & Son although the American Ship Windless Company will furnish her with the favorite Providence steam windlass, new style, and capstans.

Captain George McKay, manager of the Mutual Transportation line has shown deep interest in the progress of the boat, and a desire to have her provided with the latest and most approved appliances of the modern ship. The engine is triple expansion 24, and 61 by 42. The three cranks are set at an angle of 120 degrees, which makes almost a perfect rotary motion. The engine will have a working pressure of 150 pounds and develope 1500 horse power. The bed plate is of box pattern, and weighs about 17 tons. This is the first triple expansion engine on the lakes and the Globe Company has gone to the expense of making a boring bar that will bore all of the journals at one time, by this means making them perfectly true. The columns are of box pattern, two to each cylinders, with a large slide service and a water back to keep them cool. Another new feature is the bolting of all three cylinders in a line. In working the engine at the docks the steam reverse is such that it could be handled by a child.

The Cambria will have two boilers, each twelve feet in diameter and fourteen feet long, with horizontal steam drums fourteen feet in diameter. The shells are of Otis steel, 1⅛ inch thick and are allowed 225 pounds pressure. Each boiler has three Ætna shaking grate furnaces.

The Cambria has a Globe sectional wheel, and when her machinery and boilers are in place, the boiler house and cabin built, and the outfit aboard, will draw about 7 feet 6 inches aft and 5 feet forward, light, and carry 2680 tons on fifteen and a half feet draft. The wheel is 13 feet diameter with 16 feet lead.

The cost of the Cambria will be about $160,000 and she will be commanded by Captain William Cummings, last season master of the propeller Sparta, and H. F. McGinnis, chief engineer of the line, will be engineer.

M. E. B. A. NOTES.

The 12th annual ball of No. 4, Chicago, was a grand success. By many it was thought to be the best one ever given.

The president of the Goodrich Transportation Company gave his check for fifty dollars for the benefit of No 4.

Captain A. R. Young, who by the way owns one of the fastest raft towing steamers on the Upper Mississippi river, was a delegate to the New York convention, and on his return to Stillwater he stopped in Chicago and Milwaukee. In both cities they gave him a royal reception.

Chairman J. H. Reid, has returned to his home in Detroit after a prolonged visit in Washington in the interest of the national association.

Past National President Nelson, was in Chicago for ten days during the recent convention. Mr. Nelson is chief engineer for the Heine Safety Boiler Company.

President Wilson of No. 6, St. Louis, is in Ohio, visiting friends.

At the second meeting of Cleveland M. E. B. A. No. 2 in January, election of officers resulted as follows: President, Wm. Lloyd; Vice-president, N. B. Sturtevant; Secretary and Treasurer, Robert S. Hays; Recording Secretary, O. Root; Corresponding Secretary, John W. Lowe; Financial Secretary, J. C. Chadwick; Conductor, A. E. Bury; Chaplain, Wm. Kennedy; Doorkeeper, J. F. Walsh.

[*Around the Lakes Continued from 1st Page.*]

BUFFALO.

Special to the Marine Record.

Mr. J. C. Gilchrist, Mr. Shupe and Captain C. E. Benham were in town last week.

Parties, it is said, are negotiating for the barge Johnson, but the trade is doubtful.

The report which has been going the rounds of late about the manager of the Union steamboat line negotiating for the charter of the propellers Russia, Cuba, Colorado, and Nebraska is not confirmed up to this writing.

Captain J. J. Brown, of the firm of Brown & Co., has entered largely into shipping interests. He is now credited with being the sole owner of the steambarge Araxes, L. W. Drake and the American Giant, her consorts last season. We wish him great success in his undertaking.

Captain Thomas Wilson was in the city on the 1st inst.

The Express says the marine world continues active and nothing unless it be labor troubles is now expected to interfer to prevent a prosperous season. There is a very active inquiry kept up for vessel property. The talk of contracts for carrying freight also continues, but nothing of much account is thought to be taken except that it is supposed considerable ore is contracted at going rates, a business which is not always made public early unless it leaks out.

The Union Steamboat Company has sold the propeller St. Louis to S. L. Watson and Peter Wex at a price said to be $20,000. She will be cut down into a towing steamer and take the place of the Nashua in the Potomac-Vought tow.

Captain James Ash has sold the schooner Ironton to Captain Thomas Wilson on private terms. She will go into the ore trade. Her valuation by the Lloyd register is $21,000. The propeller Russia is not sold.

Captain Bradford is busy in his marine school at the top of the Lehigh building, at Main and Seneca streets. Quite a number of captains attend, and more will come when the line appointments are made.

The new tug being built at O'Grady's yard for Hand & Johnson's line is fast nearing completion. Her hull is about finished and her boiler and engine, it is said, will be put in within a month. When navigation opens it will give the dock idlers something to look at that will open their eyes in wonder.

George H. Notter, the boat builder, is just now head over heels in work. He is building one first class canal boat for Captain J. H. Roberts, one for Captain W. C. Callaghan, and one steamer for Michael O'Hallarin of New York city. Mr. Notter is also building a new tug for Hingston & Woods which will probably show her heels to the best that ply the canal in the summer months.

A 100 foot long iron steamer is being built for Georgetown, S. C., parties by G. H. Notter which when completed will be used as a mail and passenger boat on one of the small rivers of that state.

Matthew McComb has bought the steamer Huntress from Staley & Booth, and is to run her from this city to his new hotel on Grand Island when the hotel is finished.

The Falconwood Club are having a large steam yacht built which will be 95 feet long, 16 feet beam, and is to be constructed throughout with steel. H. G. Trout will furnish the engine, and the Eagle Iron Works the boiler.

A scheme is on foot, it is said, to establish a line from Fairport to Duluth in the interest of the B. & O. railroad. Should the report prove true, the Buffalo-Duluth trade must suffer.

The Buffalo Express says it is reported that the proposition to establish a line from Fairport to Duluth in the interest of the Baltimore & Ohio Railroad has been revived. As this is the only pronounced rival of Buffalo's comparative monopoly of the Duluth grain trade its establishment, should it take place, will be of considerable interest here.

The report that the companies in which Ryan's propeller the Canadian Nipigon, was insured have made an assignment will not be likely to make the "legitimate" companies feel very sad. The Nipigon lies at Clayton, on the St. Lawrence, in a partly burned condition, hence the local interest in the fate of the companies that issued the fire policies on her. It is learned that Mr. Ryan will rebuild her.

The eleven coal cargoes nipped in the ice last fall on their way from Buffalo to Lake Michigan are still mostly afloat. The reason why they have not been sold is that they were nearly all of sizes not in special demand. The rush this winter is for chestnut coal, but only the schooner Jonn Shaw appears to have been loaded with the size. This cargo was very readily sold last week to dealers where the vessel lies. Nearly all the belated coal is wintering at Detroit, only the schooner J. I. Case and C. H. Burton being reported at Port Huron and the propeller James Pickands at Cleveland. The latter will complete her trip at spring rates, according to the terms of her charter.

The marine elevator is reported as having made a receiving rate from cars of three fourths of a cent a bushel with free delivery, five days' free storage, and free of switching charges to any road connected with the Buffalo creek railway. Negotiable warehouse receipts are included.

The Union steamboat company has sold the propeller Arctic to Geo. Hall & Company of Ogdensburg for $18,000 cash, transfer to be made at once. She will be used for towing the barges H. J. Mills and W. A. Sherman, which was bought by the same parties of the Fortier estate last season. Manager Bullard maintains a discreet silence in regard to the greatly reduced proportions of his line by the sale of six propellers, but it need not be inferred from that fact that he intends to let the line suffer if outside boats can be leased at fair rates.

It is said that the brothers Andrew and Robert Graves have tendered their resignation to Mr. Ash, the owner of the steambarge Calumet and Hecla, although both owned interests in the respective boats and sailed for Mr. Ash many years.

WM.

MILWAUKEE.

Special to the Marine Recd

On January 22 the Roswell P. Flower was launched, and a very fine launch it was. She started down the ways easily and struck the water evenly. It rained hard all day, but the men stuck to their task and worked like heroes, drenched to the skin, from morning until night. The launch took place Saturday, January 22, at 4 o'clock p. m. and at 4:30 o'clock January 29, a week later, the keel for the new mammoth 306 feet long steamer was in position, with four frames up, on the same place that the Flower had vacated. Rather quick work, but Butler don't sleep any during the day. The launch went nicely, a large number of spectators being on hand in spite of the rain, among them a large quota of distinguished vessel captains. No accidents occurred although the evangelist, in trying to swallow a soda-cracker whole, succeeded in getting it lodged in his glottis, but Drs. Cochrane and Gibbs inserted the nozzle of an 1½ inch hose in his mouth, and by turning on a full head of water dislodged it, and he still survives.

With Captain Duncan Buie, of the steamer Keystone, I visited the Palace theater one night last week to witness a play or mellow drama, entitled "A Brave Woman." Captain Buie said it took a brave woman to play it, and during the storm scene his feelings so overcame him that he actually wept; real weep, too, it was, for the lachrymal fluid ruined his handkerchief, and he insisted upon wandering before the play was concluded, and we wandered.

Captain Ed Thorp has succeeded in securing a craft provided with a center board box. More power to him.

I met Ajax on the street the other day and had quite a chat with him. He is entirely in love with his vessel and well he may be. I have often read about grace, but the best example that I have seen of it was when I saw Ajax raise his hat to a pretty school mistress sitting on a step like little Sally Waters, in the sun. The ease, the grace, the abandon with which he crooked his elbow filled me with wonder and amazement; but mebbe his better-half might read the RECORD.

Six of our gallant captains were selected to serve on the jury not long ago, and valiantly they acquitted themselves, and the culprit also. The six good and true were Captains Thompson, Moody, Bruce, Claque, Williams, and Anderson. A few days after they had given in their verdict they happened to be sitting in the tug office, airing their knowledge of jurisprudence, when an elegant looking, stylishly attired, golden-haired lady entered and inquired of Fred Starke if the gentlemen who composed the jury could be found there. "Certainly, madam," said Fred, "they are here," and forthwith introduced them to her. She gazed long and earnestly at each one of them, tendered each her grateful thanks, embraced each one and gracefully withdrew. After a moment's silence Captain Bruce said: "I was always a lover of osculatory exercises, but alwaws preferred to go it alone and away from the crowd, but this time I don't care a cent for the universe," and the other five cried, "us, too." Moral: Always give the right kind of a verdict, and you will get your reward, beside the two dollars the city pays you.

A one-third interest in the steambarge Joyce has been sold by the Milwaukee shipyard company and G. D. Norris & Company to William Starkey for $6,333.33.

Captain Mart Swain has been here looking after the repairs being made to the tug Leviathan. He left for Detroit Monday. He will probably sail the Leviathan next season.

CAPTAIN KIDD.

WYANDOTTE.

Special to the Marine Record.

The Detroit Drydock Co. are building a composite steamship, length water line 250 feet, over all 266 feet, beam 40 feet outside frames, 41 feet outside planking, moulded depth 21½ feet. She is differently constructed from anything yet built. She has three strakes of iron top sides, and is planked below those by 6-inch oak plank. All her constructed parts are of iron; underneath the planking on the bilges runs a strake of iron plating 3½ feet wide, to which connect a system of diagonals, fastened to the bottom of the top cord. Her floors are 27 inches deep and ⅝ths thick. She has a continuous center keel plate, a pair of intercostals. On top of the floors are the center and two sister keelsons. She is strengthened by four water tight bulkheads, and a sufficient number of web frames. The appliance of her center board box for an iron vessel will be an experimental one. The center board is arranged forward of the fore hatch and only extends as far up as the orlop deck beams, which deck consists of 8 inch I beams, without planks except aft near engine and boilers, where an iron deck for coal bunkers is laid. The upper or spar deck consists of 7-inch bulb beams, planked with 4-inch pine, diagonally strapped. The hatches are arranged in pairs, having an iron stringer, 4 feet wide, in between. A special hatch is provided, between engine and boiler, to facilitate trimming. Her machinery will comprise triple expansion engine 20, 30 and 52x40 stroke, boilers of Scotch type 11x11 each, having two 40-inch furnaces, calculated to stand pressure of 150 pounds. Steam steering and hoising gear and the American Ship Windlass Co.'s steam capstan and windlass. She will carry three masts with fore and aft sails. Her cabins, engine room, etc., will be fitted with the best modern improvements. She is being built for Captain E. M. Peck, of the N. W. T. Co. Her designer is Fred Ballin, of the Detroit Drydock Co.

WILLIAMS.

ASHTABULA HARBOR.

Special to the Marine Record.

Mr. Henry Esseltyne of Detroit, was here last week in the interest of his schooner the Monterey, now being repaired by J. P. Devney.

Captain William Downs informs the writer that he will have another tug here next season to work with his opposition tug the John Gordon.

Paymaster Captain M. F. Manning went to Cleveland last week to order a new suit of sails for his yacht the Youghiougheny. Many of your readers are familiar with Mit.'s yacht.

The schooner Monterey is being rebuilt at Devney's shipyard. She is receiving cants forward and aft, new ceiling, cabin covering, some rail, stanchions, and other repairs.

The tug Red Cloud, of the Field line, is getting new cabin and deck. The steambarge James H. Prentice is having her ceiling caulked.

SAINT MARY'S RIVER.

The following letter from the secretary of war, transmitting, with inclosures, an estimate from the chief of engineers of cost of improving Saint Mary's river, Michigan, and of continuing work on new lock, was referred to the committee on rivers and harbors and ordered to be printed:

WAR DEPARTMENT,
WASHINGTON CITY, Jan. 5, 1887.

The Speaker of the House of Representatives:

The secretary of war has the honor to transmit to the house of representatives, for the information of the committee on rivers and harbors, a letter of the 31st ultimo from the chief of engineers, together with a copy of one from Lieut Col. Poe, corps of engineers, submitting a revised estimate of the probable cost of improving Saint Mary's river, Michigan, and continuing the improvement by means of a new lock and approaches.

WM. C. ENDICOTT,
Secretary of War.

OFFICE CHIEF OF ENGINEERS,
UNITED STATES ARMY,
WASHINGTON, D. C., Dec. 31, 1886.

The Secretary of War:

SIR: I have the honor to transmit the inclosed copy of a communication to this office, dated December 22, 1886, from Lieut. Col. O. M. Poe, corps of engineers, submitting revised estimate of the probable cost of improving Saint Mary's river, Michigan, and continuing the improvement by means of a new lock and appoaches, and to recommend that it be sent to the speaker of the house of representatives for the information of the committee on rivers and harbors.

Very respectfully, your obedient servant,

J. C. DUANE,
Brig. Gen., Chief of Engineers.

REPORT OF LIEUTENANT-COLONEL O. M. POE, CORPS OF ENGINEERS.

UNITED STATES ENGINEER OFFICE,
34 CONGRESS STREET WEST.
DETROIT, MICH., Dec. 22, 1886.

The Chief of Engineers, U. S. A:

SIR: The problem of "improving Saint Mary's river, Michigan, continuing improvement by a new lock and approaches," has reached that stage when it is practicable to submit a better estimate of the probable cost than it has been possible to make prior to this time.

Certain general features of the project submitted for consideration with my letter of August 25, 1886, have already received the approval of the chief of engineers and the war department, viz., the general dimensions of the proposed lock (800 feet between hollow quoins, 100 feet wide throughout, 21 feet of water on the miter-sills, and a single lift of 18 feet); the navigable depth of the canal prism (20 feet); the omission of middle gates, the number of filling culverts to be not less than four nor more than six.

Since submitting the project referred to, an accident of a character not anticipated has occurred to the lower gates of the lock of 1881 (see my letter of December 21, 1886, indicating the probability that it would be wise to reconsider the action adverse to the construction of a set of intermediate gates, with a view to reducing to a minimum the length of time that navigation would be interrupted in case of such injury to the lower gates as to require them to be rebuilt). If such an accident were to happen, a set of intermediate gates, just above the lower gates, would serve a valuable purpose not heretofore considered, namely, to permit the use of the lock, somewhat shortened in the chamber, whilst the new gates were under construction. This matter is so important that I feel compelled to reconsider my former proposition, and to now recommend that a set of intermediate gates be provided for to be placed as near the lower gates as circumstances will permit, but not above the middle of the lock chamber.

In making up the estimates I have avoided going into detail as regards dimensions and modes of construction, preferring to leave all questions relating to these matters in such form as to admit of complete flexibility.

For convenience in estimating, the work has been divided into thirteen parts, as follows:

1. For building the coffer-dam, plans, estimates, and specifications were submitted by me, under date of October 18, 1886, and duly approved, the estimated cost being $195,392.88, the materials to be furnished by contract and the work done by the same mode.

2. Excavating the lock-pit.—The estimate is made as follows: The amount to be excavated is very nearly twice as great as was required for the lock of 1881, the cost of which was $176,850. Since the character of material, cost of labor, facilities for dumping, etc., are practically the same in both cases, the total cost will be proportional to the amount. Therefore, the estimated cost of excavating the lock-pit for the proposed lock is $353,700, or about $1.25 per cubic yard. This part of the work should be done by contract.

3. Building culverts and lock-floor.—Since there are to be nearly five times as many linear feet of culverts in the proposed lock as in that of 1881, the cost is estimated at five times the cost of the present culverts, or $285,000, and since the floor and foundations in the proposed lock are twice as large as in that of 1881, the cost is estimated at twice that of the present floor and foundations, or $170,000, making together the sum of $455,000. This part of the work should be done by contract.

4. Masonry of the lock-walls.—It is estimated that there will be 70,000 cubic yards of stone work. The cost per yard in lock of 1881 was about $14 per cubic yard. The estimated cost of masonry in the proposed lock is therefore $980,000. The manner of doing this is left in abeyance.

5. The gates.—The material of which the gates should be built has not yet been determined. If it should be decided to build them of iron there is nothing with which to compare them, and estimates can only be made after the material and plans have been settled upon. As an approximate estimate, however, sufficient, probably, to cover the cost whatever material be used, the sum of $250,000 may be named, and it is probable that the work should be done by contract, certainly in that manner in case iron be selected as the materal.

6. Lock machinery, machine-house, etc.—The cost of these need not materially exceed that of the lock of 1881, which was about $80,500, or, say, for the new lock, $100,000.

7. Deepening the canal.—The approved project contemplates a 20-foot navigation. At present vessels pass drawing fifteen feet of water. When the lock is being filled the lowering of the water in the canal occasionally causes them to touch bottom. This will be much more liable to occur when there are several more culverts in operation. There should then be at least one foot of water under the keel of a vessel drawing twenty feet. The extent of deepening required is, therefore, six feet. The amount to be excavated for this depth between the upper end of the locks and the old coffer-dam is 150,000 cubic yards, and is all sandstone bed-rock, and the cost of excavation of this portion is estimated at $3 per cubic yard, or a total of $450,000.

The amount to be excavated above the old coffer dam is estimated at 225 000 cubic yards. This portion is softer material, and the cost of its removal is estimated at 40 cents per cubic yard, or a total of $90,000.

The amount to be removed from below the locks is estimated at 64.000 cubic yards of bed-rock and bowlders, all of which must be excavated under water. The cost is estimated at $3 per cubic yard, or a total of $192,000.

The aggregate cost of excavation is consequently estimated at $450,000+$90,000+$192,000=$732,000 and the whole of it should be done by contract.

8. New movable dam.—Since the length of the wickets will be six feet greater, the new dam should be about twice as strong as the present one, the cost of which was $95,500. The estimated cost of the new one is, therefore, $191,000.

9. Building pier in front of Fort Brady reservation, and extension of the northeast pier.—These constitute a part of the approaches to the locks. The former was contemplated when the water-front of the military reservation was set apart for canal purposes, and has been many times referred to within the last three years. It should be one of the earliest works undertaken. Its length will be about 1,200 feet, and its cost is estimated at $40,000. The northeast pier need not be built until some time has elapsed. Its length will be about 1.200 feet, and its cost is estimated at $50,000, or an aggregate of $90,000 for the two.

10. Earth filling.—The amount of this that will be required is estimated at twice the quantity required for the lock of 1881, and its total cost at twice that in the latter case, or $44 000.

11. Building canal office and warehouse.—These should be substantial, and include a fire-proof vault for the storage of the drawings, note-books, canal-books, and other valuable records, both during the progress of the work and after its completion. This vault should be built in the earlier stages of the work. The cost of the buildings is estimated at $75,000.

12. Engineering and office expenses.—These are estimated at $300,000, upon the supposition that the work will be in progress for ten years.

13. Pumping lock-pit.—The cost of this is estimated at $25,000, but it should be understood that this is the merest guesswork, as it is utterly impossible to predict what will be required and definitely estimate its cost.

Contingencies.—The contingencies in a work of the character of this one are so numerous and so uncertain that the ordinary estimate of 10 per cent is not deemed sufficient, and in my opinion it is not safe to estimate them at less than 25 per cent, especially in view of the fact that the comparison with former work depend upon the prices of material and labor at that time, and they may prove to be considerably greater in the new work.

The estimate of the cost of this work, the largest of its kind in the world, may then be summarized as follows:

For coffer dam	$195,392
For excavating lock-pit	353,700
For culverts and lock-floor	455,000
For masonry of lock-walls	980,000
For lock-gates	250,000
For lock machinery	100,000
For deepening the canal	732,000
For new movable dam	191,000
For building pier in front of Fort Brady reservation and extending northeast pier	90,000
For earth filling	44,000
For building canal office, warehouse, fire-proof vault, etc	75,000
For engineering and office expenses	300,000
For pumping lock-pit	25,000
For contingencies, 25 per cent	947.773
Total	4,738,865

There are still two items not estimated for in the foregoing, which are in the nature of contingencies. The first is referred to in my general project, and relates to the possibility of a nece-sity for increasing the cross-section of the prism in order to furnish a sufficient water supply to the culverts, without causing dangerous currents in the canal. The probability is that the railroad drawbridge over the canal, authorized by the act of congress approved July 8, 1882, will be built during next summer. Afterward the increased waterway could only be obtained by excavating a channel under the land span of the draw-bridge.

The second would arise from the necessity for building a movable dam over this new channel.

The aggregate cost of these two items would be large, but for the reason that the necessity for them has not been demonstrated, no attempt is made to estimate for them.

I am, sir, very respectfully, your obedient servant,

O. M. POE.
Lieut. Col. of Engineers, Bvt. Brig. Gen., U. S. A.

THAT SAULT BRIDGE.

Hon. George H. Ely, of Cleveland, had a hearing last week before the senate committee on commerce in relation to a railway bridge across the St. Mary's river at the Sault. In 1882 an act was passed by congress granting to a Michigan company the right to construct a bridge across the river, but nothing was done with the franchise. Last summer a Minnesota company, headed by ex Congressman Washburn, went before congress and asked that inasmuch as the Michigan company had not built the bridge a bill be passed giving the Minnesota company the right of submitting plans for the same, and if the same should be approved by the secretary of war ahead of those of the Michigan company, then they (the Minnesota) might build the bridge, which should be used in common by all railroads crossing the Sault ste Marie's river. This bill was passed by the house, and is now before the senate committee on commerce. Mr. Ely came here as the representative of the great vessel interests navigating the river in question, not to fight the building of the bridge, but to see to it that the bill should be framed in a manner that would not be inimical to the vessel interests. He found on coming that one provision of the bill was that the draw should be kept closed at all times except when vessels desired to pass. This he wanted to have changed so that the draw should be kept open at all times except when trains desired to pass, for the reason that vessels coming down the current at a full head of speed would be less able to control their own movements than could a railway train. The friends of the bill were unwilling to allow of any amendment, but finally consented to do so when it was found that in a recent report General Poe, in charge of the improvements about the Sault, had recommended that an amendment as desired by Mr. Ely should be made. After some discussion the friends of the Minnesota company, headed by Representative Gilfillan and Mr. Washburn, agreed that the amendment should be made, with the proviso at the end giving the secretary of war discretion in the matter. This proviso, however, the vesselmen do not regard as significant. The amendment then which has been agreed upon and which the committee will probably adopt, is as follows: And whether the said bridge shall be constructed under the said act of July 8, 1882, or under this act the operation or working of said draw bridge shall be subject to such rules and regulations as he may prescribe; but in either case, "during the season of navigation, the draw shall habitually stand open, and may be closed for the passage of a train or trains only when they are in actual readiness to cross, and it shall be reopened immediately after said train or trains shall have passed it;" but the secretary of war may, in his discretion, relax the operation of this requirement during such hours of the day or night as may not be used or required for the passage of boats or other craft through said canal or locks.

Mr. Ely, in addressing the committee, read some statistics which he had collected from this recent report of General Poe, and which show a wonderful increase of business for the canal during the last year. The main features of these statistics are as follows: The canal was open to navigation 224 days, the first vessel having passed the 25th of April and the last on the 4th of December. The season was thirteen days longer than in 1883. On the 15th of July 67 vessels passed through the locks, this being the largest number in one day in the history of the canal; the average number passing daily in the month of June was 40; during July, 41¾; August, 40⅔; or for the three months daily, 40⅔. The daily average freight tonnage for the same time was 23,371 tons. The largest freight tonnage ever passed through in one day was on July 28, 1886, when 63 vessels, carrying 43,442 tons, were locked through. The registered tonnage passing in 1886 was 4,219,397 tons; freight tonnage passing in 1886, 4,527,759 tons; the ratio of increase over the year 1885 was 39 per cent in each case. The increase in freight tonnage over that of 1885 was 1,271,131 tons, of which 67 per cent was iron ore, although there was an increase also in the amount of every other article except silver ore. The same table shows the approximate value of the freight—the same valuations are used as in the corresponding statement for 1885. The aggregate for 1886 is $169,080,071.95, being an increase of 29 per cent over the aggregate value of 1885.

While the senate committee has taken no action, it is confidently believed that it will recommend an amendment of the bill. If the bridge be built at the locks, it will do less harm to navigation than if elsewhere, for there the vessels would have to break their tows whether there were a bridge or not, and under the circumstances the vessel men will not oppose the bill if amended as suggested.

NAVAL APPROPRIATION BILL.

The naval appropriation bill was completed at Friday afternoon's session of the house committee on naval affairs. The total appropriation made by the bill is $23,067,042, while the estimates were $20,639,756, and the appropriation for the current year $16,242,558. An appropriation is made on account of ordnance and armor sufficient in amount to supply all the vessels now building with the object of enabling the secretary of the navy to make more advantageous terms through contracts in bulk. These items amount to $2,128,362 and $2,500 000, respectively. An appropriation is also made of $4 000,000 for armor for the vessels authoized in 1886.

SANDUSKY DISTRICT.

Captain T. C. McGee, an old time mariner, has compiled a list of vessels, built owned or documented in the Sandusky district since 1822 for the MARINE RECORD. The list will be continued in short space until all are told:

SCHOONERS.

Name.	Where Built.	Y'r	Ton.
Blue Bell	Huron	1844	150
Charles Howard	do	1845	164
Emily	do	1840	108
Washington Irving	Cleveland	1844	112
Merit Hunt	Danbery	1845	38
Hope	Vermillion	1842	26
Coneaut Packet	Coneaut	1845	36
Itaska	Milan	1847	199
Fashion	do	1847	228
Puritan	do	1843	223
J. B. Skinner	do	1844	142
Birmingham	Vermillion	1843	107
Genl. Porter	Danbery	1847	37
Ambrascade	do	1847	17
Maria Cobb	Vermillion	1847	231
Napolean	do	1847	45
Pilot	Sandusky	1847	40
Erie	Plastorbed	1847	71
Plymouth	Huron	1847	197
Home	Lower Sandusky	1843	147
M. C. Bronson	Euclid	1845	23
Eagle	Sandusky	1845	185
Dayton	Grand Haven	1834	84
Magnolia	Black River	1845	128
Leander	Danbery	1838	145
Geo. Davis	Milan	1846	238
Sea Gull	do	1845	114
Josephine	Sandusky	1837	43
Luther Wright	Huron	1845	195
Aroria Borealis	Oswego	1835	94
Emeline	Danbury	1846	20
Thomas Corwin	Black River	1840	128
Monsoon	Milan	1847	189
Dawn	do	1847	202
Forrest	Huron	1847	200
Nucleus No 2	Black River	1846	185
Pilgrim	Milan	1847	228
Excelsior	do	1847	287
Baltimore	Sackets Harbor	1836	119
J. G. King	Dunkirk	1836	153
Mary A. Larnard	Michigan	1846	80
Ellington	Vermillion	1847	185
Traveler	do	1847	33
West Chester	Huron	1845	120
New Jersey	Vermillion	1850	68
Pontiac	Michigan	1847	75
Navigator	Erie	1834	107
Crevola	Milan	1848	273
Lindon	Vermillion	1848	08
Mary	Milan	1848	212
Huron	Huron	1832	132
C. L. Burton	Vermillion	1850	123

STEAMERS.

Genl. Porter	Black Rock	1834	342
Islander	Kelly's Island	1846	74
Genl. Scott	Huron	1839	240

BRIGS

Columbia	Sandusky	1847	176
Castalia	do	1847	240
North Hampton	do	1847	240
St. Louis	do	1835	150

SLOOP.

Isaac Russ	Michigan	1850	42

S. F. HODGE & CO.

Special Correspondence to the Marine Record.

DETROIT, February 1.

At S. F. Hodge & Co.'s, Riverside Iron Works, 314 to 326 Atwater street, your correspondent found everybody in all departments as busy as possible, and that the company had been forced to refuse many contracts for marine work, as they could not fill them by the time they were required. They have nearly completed a triple expansion engine with cylinders 21, 32 and 54 by 42 stroke, which will be supplied with steam from two Scotch boilers 10 feet in diameter and 11 feet 6 inches long, working with a pressure of 150 pounds, for James Davidson's new steamship, building at West Bay City. They have just commenced a duplicate of the above for use on a steamship which Messrs. Wolf & Davidson are about to build at Milwaukee. They are constructing a triple expansion engine, with cylinders 19, 30 and 48 by 40 stroke, to be supplied with steam from two Scotch boilers 10 by 11 feet, with a pressure of 150 pounds, for Craig & Son, Trenton. A fore and aft compound engine, cylinders 31 and 54 by 45, supplied by steam from two Scotch boilers, 12 by 12, for the St. Clair, Michigan, Steamship Co., for a steamship, building by Simon Langell. A fore and aft compound engine, 30 and 54 by 45, with fire box boilers, 9 by 16, for the steamship, Roswell P. Flower, recently launched at Milwaukee, by Wolf & Davidson. One fore and aft compound engine 23 and 42 by 30, steam to be supplied by a boiler of ½ inch steel, with pressure of 125 pounds, for the Graham & Morton Transportation Co., Chicago. One fore and aft compound engine, 26 and 44 by 40, to be supplied with steam by one fire box boiler 10 feet 6 inches by 16 feet, with 100 pounds pressure of steam for a steamship, building by Craig & Son, Trenton, to be out by May 1st. The following boats are being compounded: Tugs Crusader and Sweepstakes, and the steamships Inter-Ocean, Argonaut, Rhoda Stewart and S. C. Hall. The fast steamer Massasauga was compounded by this firm in the fall.

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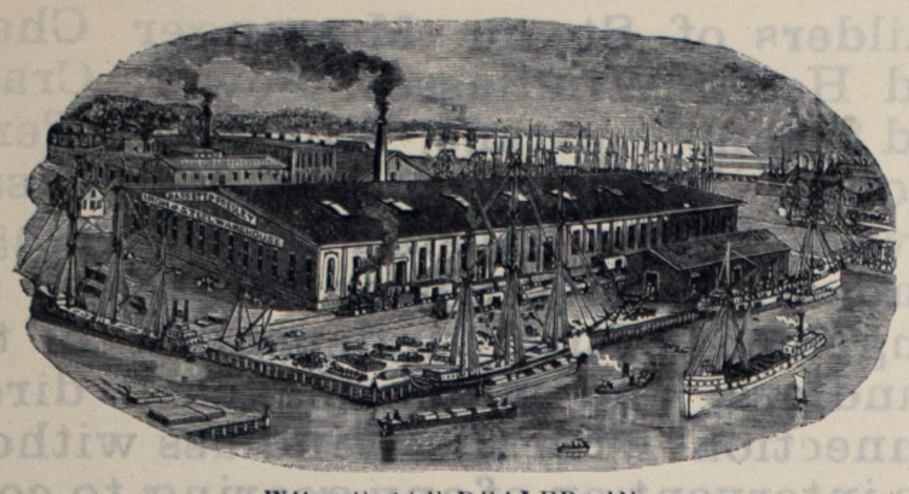

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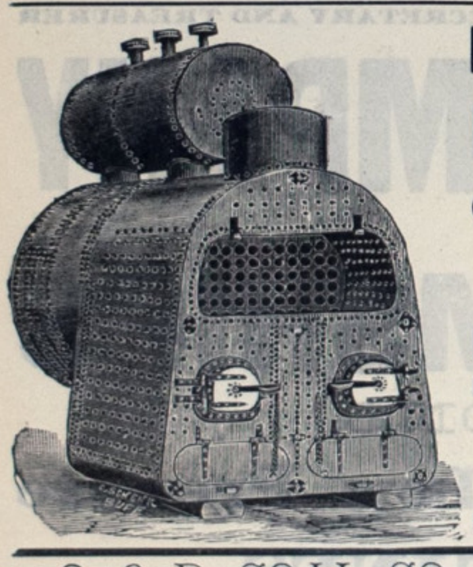

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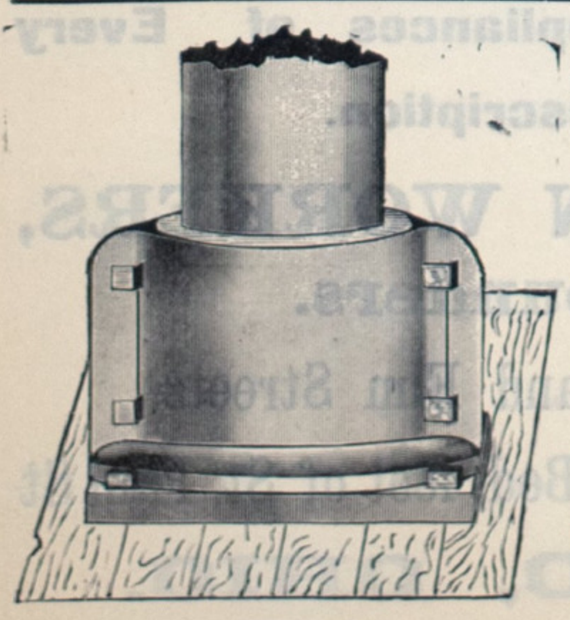

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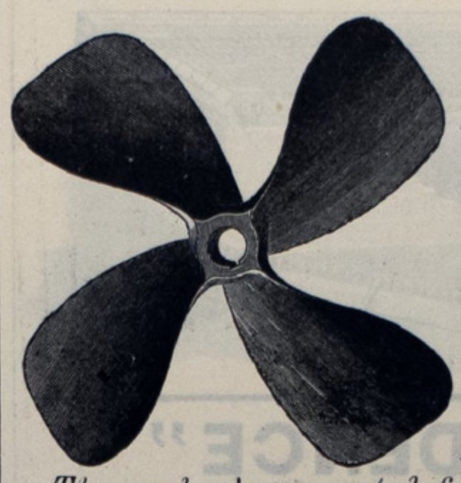

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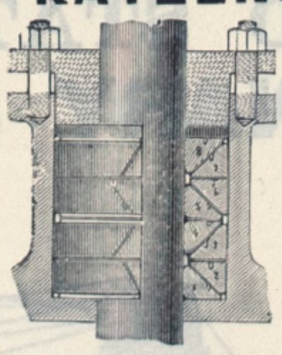

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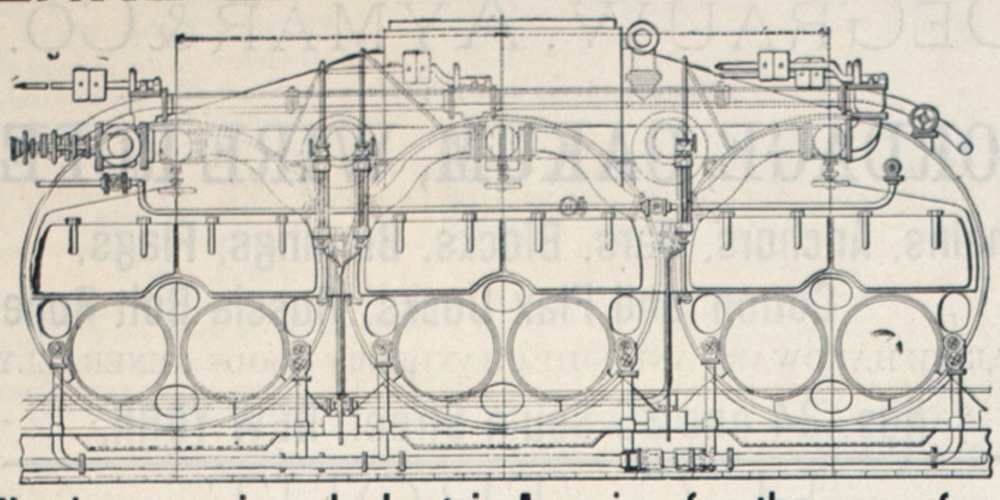

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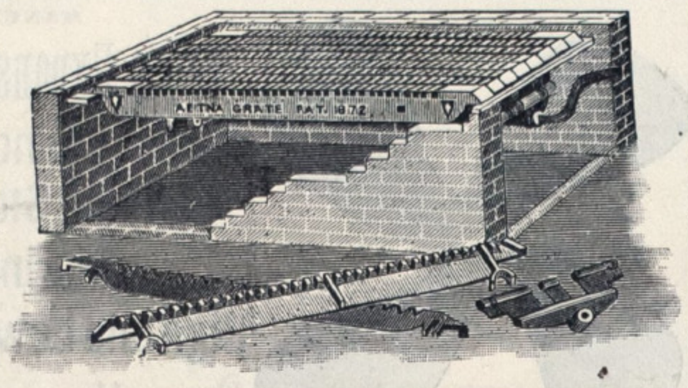

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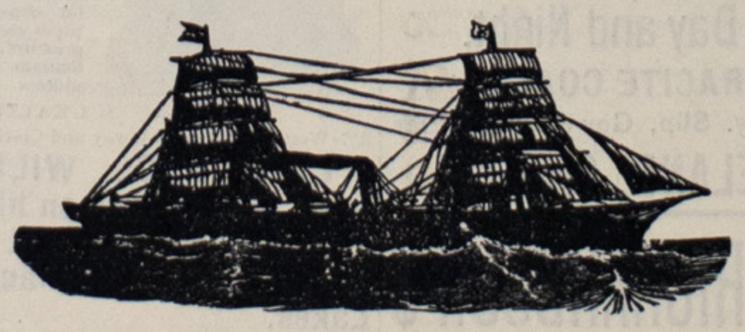

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Iron Tugs "International" and "Record."

OFFICE & WORKS, Spruce and Elm Streets.

IRON SHIP YARD, Old River Bed, foot of St. Paul St

CLEVELAND, OHIO.